

## SUBCOMMITTEE NO. 4

## Agenda

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Joseph Dunn, Chair  
Tom McClintock  
Christine Kehoe



Wednesday, February 9, 2005  
1:00 p.m.  
Room 3191

Consultant, Brian Annis

**Subject:** Department of Transportation: Oversize-Load Permit Process

**Attachments:** Summary from the May 2000 California State Auditor's report, *California's Department of Transportation: Has Improved Its Process for Issuing Permits for Oversize Trucks, but More Can be Done.* (<http://www.bsa.ca.gov/bsa/pdfs/99141.pdf>)

Department of Transportation, Transportation Permit Management System project website. (<http://www.dot.ca.gov/hq/traffops/permits/tpms.htm>)

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**ISSUE: Oversize-Load Permit Process**

**DESCRIPTION:** Caltrans indicates its new oversize-load truck permit computer system (the Transportation Permit Management System – TPMS) will begin statewide production use on March 31, 2005. Funding for eight limited-term positions that “double-check” transportation permits expired in December 2004; however, Caltrans indicates it is administratively continuing these positions until TPMS is implemented.

The purpose of this hearing is to examine and assess the Department of Transportation’s efforts to issue accurate oversize-load permits and safely convert to TPMS. The Department should be prepared to discuss the permit process and its plans for the future operation of the program.

**BACKGROUND:** The Department of Transportation has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Permits are obtained by submitting an application to the Transportation Permit Branch in Caltrans’ Traffic Operations Program.

In July 1999, a fatal accident occurred in Orange County when a truck carrying an oversize load struck a bridge along State Route 91. As a result of the bridge hit, the load of the truck fell on a passenger vehicle and killed that vehicle’s driver. The accident occurred when a permit writer in the South Region Permits Office erroneously overlooked a clearance notice and incorrectly approved the permit request.

In response to this accident, the Senate Transportation Committee convened a hearing in October 1999, in the City of Downey, to question Caltrans about this accident and about other concerns with the permit program. Subsequent to the Senate hearing and correspondence with Caltrans, the Legislature approved an audit of Caltrans’ permit program to determine the changes necessary to improve the safety and efficiency of the program.

The Bureau of State Audits completed its work and submitted the audit report to the Legislature on May 31, 2000. As part of the Auditor’s overall review and findings, the following key issues were identified:

- The Permits Division at Caltrans did not have consistent access to important information regarding state highways and bridges because of a poor communication system and lack of personnel who serve as regional liaisons.
- There was a lack of uniformity and consistency regarding data collection and reporting of roadway changes.
- The permit writing process was labor intensive and too susceptible to human error.
- Approximately 31 accidents involving oversized vehicles that struck bridges occurred from January 1996 to April 2000.

Prior to the audit report, Caltrans acknowledged problems with the permit program. Caltrans conveyed to the Legislature a series of short-term changes to address these issues including: the hiring of additional permit staff; improvements to the existing computer system (the Single Trip Application and Routing System – STARS); increased training for permit staff; and “double

checking” of all permits for vehicles with a height over 14 feet. These changes were intended to address the short-term needs of the program until a more comprehensive solution could be implemented.

A major component of Caltrans’ long-term solution was to implement an automated routing/permit system, designed to improve the program’s efficiency and safety. The advantages of utilizing the automated system are focused in the areas of data collection and reporting, reducing turnaround times for permits, and significantly reducing the potential for human error. The new system was dubbed the Transportation Permits Management System (TPMS).

The Legislature approved \$11.7 million for the TPMS project in 2000-01. Of this amount, \$5.1 million for post-implementation maintenance was reverted in 2002-03, leaving a net of \$6.6 million for the project. The original estimate from Caltrans was to have TPMS in place by the end of 2000. The estimate of the completion date was pushed back several times and Caltrans now indicates the system will begin operation on March 31, 2005.

Caltrans awarded the TPMS development contract to Bentley Systems on January 17, 2002. Bentley would customize their “GeoTransport ARPS application,” which is in production in Maryland, Michigan, Minnesota, North Carolina, and South Carolina. Near the end of the design phase of the project in the fall of 2002, Caltrans felt improvements to the existing STARS permit system merited a new consideration of the need for TPMS. The Administration hired the consulting firm of Booz Allen Hamilton to assess whether transportation-permit business objectives would best be met with TPMS or with the existing STARS. The consultant report found that STARS met only 45 percent of the Request for Proposal (RFP) requirements, while the Bentley design for TPMS would meet 86 percent of RFP requirements. In May 2003, the Administration decided to proceed with TPMS, and Caltrans began discussions with Bentley on the RFP requirements that Booz Allen Hamilton asserted were unmet with the Bentley design. Bentley started system customization on May 14, 2004.

The limited-term double-checker positions have been extended several times by the Legislature as the completion of TPMS has been delayed. In 2003, the Administration requested to extend only eight of 15 limited-term positions, due to increased usage of the STARS and the resulting reduction in workload. Caltrans reports that in addition to this reduction, two vacant positions have since been eliminated and one redirected position has been returned.

<b>Transportation Permit Staffing</b>							
	<b>1998- 99</b>	<b>1999- 00</b>	<b>2000- 01</b>	<b>2001- 02</b>	<b>2002- 03</b>	<b>2003- 04</b>	<b>2004- 05</b>
Base staffing	41	41	41	41	41	41	41
Redirected positions	0	27	11	10	10	10	9
Limited-term positions	0	0	15	15	15	8	8
Vacant position eliminations	0	0	0	0	0	-2	-2
<b>Total</b>	<b>41</b>	<b>68</b>	<b>67</b>	<b>66</b>	<b>66</b>	<b>57</b>	<b>56</b>

Source: Caltrans

The Department assembled a Caltrans Transportation Permits Advisory Council (CTPAC) to provide a forum for government and industry viewpoints on the transportation permitting policies and procedures. Members include the California Trucking Association, the California Highway Patrol, and other governmental and business interests. The CTPAC met on June 9, 2004, and Caltrans presented a demonstration of TPMS.

Caltrans reports there have been no bridge hits due to permit writer error in about four years.

#### **QUESTIONS FOR CALTRANS:**

1. Provide an overview of the current permit process and describe the changes that will occur with the Transportation Permit Management System (TPMS).
2. What steps is Caltrans taking to ensure safety during the conversion to TPMS?
3. With the implementation of TPMS, Caltrans is losing funding for eight limited-term positions that provided double-checking of transportation permits. What is the ongoing staffing need to ensure that all oversize-load permits are accurate? Will the nine “redirected” permit positions be retained or returned to other functions?
4. What type and what percent of permit applications will be approved through TPMS without any human double-checking?

# California State Auditor

B U R E A U O F S T A T E A U D I T S

## **California's Department of Transportation:**

*Has Improved Its Process for Issuing  
Permits for Oversize Trucks, but More  
Can Be Done*



May 2000  
99141

# INTRODUCTION

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## BACKGROUND

California's Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's state highway system. As part of this responsibility, Caltrans manages approximately 15,000 miles of highway, over 12,000 bridges, and more than 230,000 acres of right-of-way. To ensure the safety of the motoring public and the integrity of this infrastructure, the California Vehicle Code (code) establishes height, weight, length, and width restrictions for vehicles and their loads. Vehicles or loads that exceed these limitations are considered oversize and require a special permit to operate on the state highway system. The code authorizes Caltrans to issue special permits for the movement of these oversize vehicles along specified routes on the state highway system. This helps ensure that oversize vehicles can pass under bridges without hitting them and travel roads without damaging the roadbed. Similarly, the code authorizes county and city governments to issue special permits for the movement of oversize vehicles through their jurisdictions.

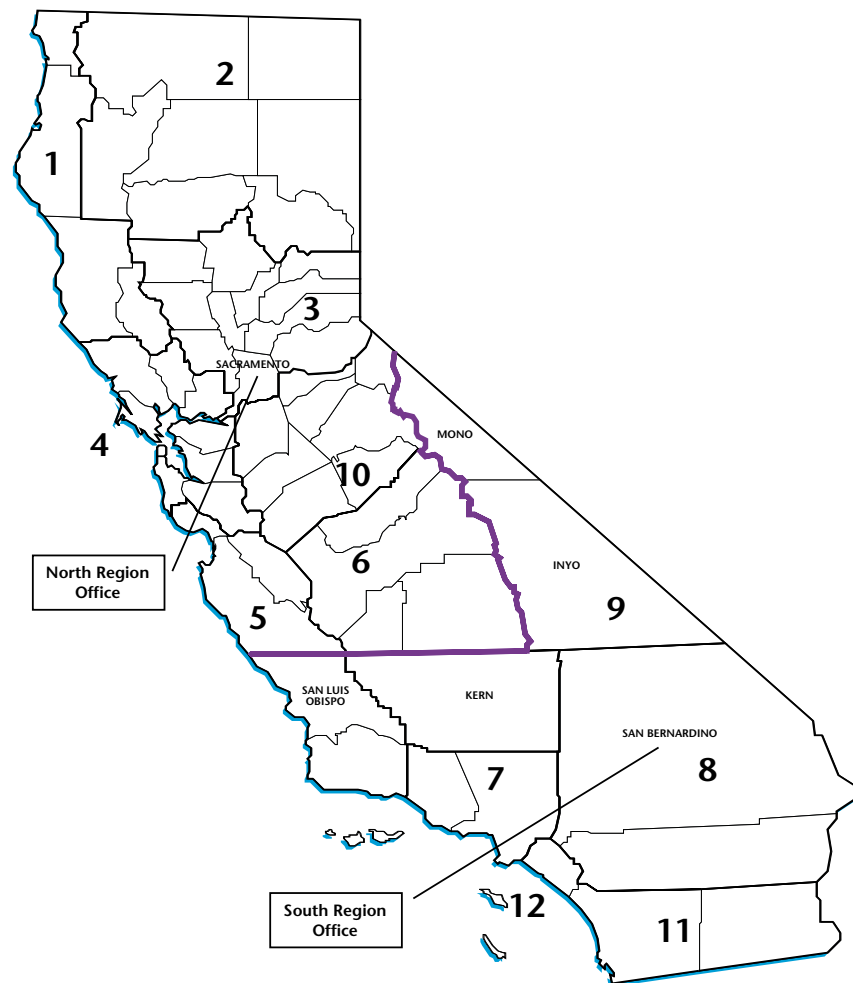
As the agency responsible for approving oversize permits, Caltrans faces the challenge of balancing the expectation of the commercial trucking industry for the timely issuance of permits with the need to ensure the safety of the motoring public and to protect the State's transportation infrastructure. Balancing these demands has become increasingly difficult as the State faces increased traffic congestion from population growth, the need to maintain and reconstruct an aging highway system, construction of additional highways and bridges to keep up with population growth and commuter trends, an increase in the size and complexity of commercial trucks and their loads, and an increase in the volume of requests for permits. In addition, some truckers do not comply with the requirements to have valid permits or to follow approved routes, thereby risking their own safety as well as the safety of other drivers.

The Transportation Permits Branch (permits branch), a unit within the Office of Truck Services, administers the oversize permits program. Two regional offices, located in Sacramento (North Region) and San Bernardino (South Region), issue the

permits. The region where the load originates is responsible for processing the permit. For example, a trucking company whose load originates in Redding will apply for a permit in the North Region Office. Figure 1 illustrates the counties served by each regional office.

**FIGURE 1**

**Twelve Districts Served by the Two Regional Offices  
of the Permits Branch**



The permits branch primarily issues four types of permits for oversize vehicles: single-trip, annual, repetitive, and variance. A single-trip permit authorizes travel from a single point of origin to a single destination in one direction. An annual permit authorizes certain standard loads or vehicles to travel within a specific geographical area. A repetitive, or multitrip, permit

allows the delivery of the same load over the same route on a regular basis for up to one year. Finally, a variance permit authorizes travel for very large or extremely heavy loads, such as those in the photographs in Figure 2. Single-trip permits represent approximately 90 percent of all permit activity. In fiscal year 1998-99, the permits branch issued approximately 186,000 oversize permits, of which 169,000 were single-trip permits. These permits are normally good for five days, with travel restricted to times and days of the week specified on the permits.

**FIGURE 2**

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**Two Examples of Oversize Vehicles That Require a Variance Permit**



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Source: Caltrans permits branch.

The permits branch issues permits for oversize vehicles after reviewing proposed routes for adequate clearances and special conditions that can restrict a route. Although certain changes in roadway conditions cannot be anticipated, such as vehicular accidents, natural disasters, or severe weather, other changes are due to planned activities such as construction projects,

Welcome to *California*[Transportation Permits Home](#)[Routing Database](#)[Interactive Application Instructions](#)[Application Forms and Accompaniments](#)[Transportation Permits Manual](#)[New Policies & Revisions](#)[Extralegal Weight Charts](#)[Pilot Car Maps](#)[CCR Proposals](#)[Route Reclassification](#)[02-07-05 Short Term Restrictions for Annual Permit Holders](#)[01-31-2005 Short Term Restrictions for Annual Permit Holders](#)[Request for Policy/Equipment exceptions](#)[Route Classification Checklist \(PDF\)](#)[Route Classification Guide \(PDF\)](#)[Links](#)

## TRAFFIC OPERATIONS

## Office of Truck Services

## TRANSPORTATION PERMITS BRANCH

## Transportation Permits Branch

[Caltrans](#) > [Traffic Operations](#) > [Truck Services](#) > [Transportation Permits Homepage](#)

**What we do:**

The Department of Transportation has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits requires the completion of and application for a Transportation Permit.

The Transportation Permits Branch is responsible for the administration of the Transportation Permit program through the uniform issuance of Transportation Permits.

This page was last modified:

[My CA](#)[This Site](#)

- [January 7, 2002: Letter to all Transportation Permits Applicants](#)
- [June 27, 2001: Letter to all Transportation Permits Applicants](#)
- [Extralegal Load Network \(ELLN\)](#)
- [Holiday Information](#)
- [STARS Information](#)
- [FAQ](#)
- [CALTRANS Transportation Permit Advisory Council \(CTPAC\)](#)
- [TPMS Project Information](#)
- [Contact Us](#)



## **Transportation Permits Management System (TPMS) Overview**

The Transportation Permits Management System (TPMS) is a computer system that will eliminate human errors in the transportation permit process. It will also allow transportation permits applicants to apply for, receive, and pay for permits through the Internet. If you would like to know more about TPMS, please click on the links below:

**Background and Business Problems** – This section describes the reasons why Caltrans is undertaking this projects.

**Objectives** – This section describes the objectives of TPMS.

**Business and Technical Requirements** – This section contains detailed descriptions of each business and technical requirement of TPMS (total of 136). The chosen vendor (Bentley Systems, Inc.) must meet each requirement to successfully complete the project.

**Benefits** – When successfully completed, TPMS will achieve these benefits.

**Status** – This is the current status of the project (updated on the first day of each month).

**Major Milestones** – Past and future major project milestones.

**Customer Training** – The section describes the training to be provided to the trucking industry end users.

**Contact Us** – Name, phone number, fax number, and e-mail address of the project manager.

# Benefits

TPMS will provide a substantial degree of automation while significantly reducing bridge hits. These benefits are described in more detail below:

## AUTOMATION

TPMS will automatically issue, without human intervention, any permit that does not require a custom-designed detour, CHP escort, or Structures review. TPMS is expected to issue 55-70% of all transportation permits automatically, in less than five minutes. Approximately 55% of all permits involve legal height loads and most likely will not require detours. Approximately 15% of permit loads are between 14' and 14'6" high and most likely will not require detours. Of the permits that require detours, many can be handled with standard detours, and will not require human intervention.

TPMS will automatically:

- Issue completed permits via the Internet, fax, and e-mail.
- Reject permit applications with missing and improper data, and inform the customer of the reason for the rejection.
- Reject permit applications with non-permissible dimensions, and inform the customer of the reason for the rejection.
- Determine whether or not an Inspection Report is required.
- Copy Inspection Report data onto the permit application.
- Validate a proposed route by comparing all vehicle and load dimensions (height, weight, width, length, and kingpin-to-last-axle) against the route conditions and restrictions.
- Determine if a permit can be issued without a permit writer's review.
- Indicate potential problems with the requested route to the permit writer.
- Identify preferred alternative State highway detours.
- Double-check the approved route before issuing the permit.
- Indicate permit writer or computer-generated revisions to the permit application in a manner that is easily recognizable by the applicant.
- Identify pilot car requirements.
- Determine and generate required permit attachment documents with the permit.
- Notify all permit holders of route condition changes affecting their routes within one hour from receipt of the change notice.
- Track the status of each permit at each stage of permit processing using a date/time stamp. (Note: The status will be viewable by the customer and Caltrans.)
- Reject permit applications from suspended companies.
- Allow the customer and permit writer to view each route segment through an electronic map or graphic medium.
- Charge credit cards before issuing the permit.

# Benefits

## **REDUCE BRIDGE HITS**

TPMS will reduce bridge hits in the following ways:

- Haulers will be more likely to obtain permits because the average permit turnaround time will be greatly reduced. Complete and accurate permit applications will be completed and returned to the applicant within five minutes. Bootlegging, and the associated bridge hits, will be reduced.
- The on-line permit application will include on-line help, default values, and Boolean logic. This will simplify the application process and increase the likelihood that out-of-state haulers and infrequent haulers will obtain permits. Bootlegging, and the associated bridge hits, will be reduced.
- All permits will be typewritten. This will reduce the likelihood that a driver will not be able to read an approved route (i.e. – it will reduce “off route” bridge hits).
- All approved routes will be written in a standardized format. This will reduce the likelihood that a driver will misunderstand the approved route (i.e. – it will reduce “off route” bridge hits).
- All permits will be automatically double-checked by the computer before they are returned to the customer. This will eliminate bridge hits due to permit writer error.
- The new system will automatically check the customer’s records (to make sure they are not suspended) before issuing a permit. This will eliminate the possibility of issuing a permit to a suspended company. The increased enforcement of suspensions will increase the likelihood that companies will be more careful with height measurements, thus reducing bridge hits. Companies will also be more likely to obtain permits, which will also reduce bridge hits.

# Status

**Updated 2/7/05**

- Caltrans signed a contract with Bentley Systems on January 17, 2002. Bentley will customize and implement their GeoTransport ARPS application, which is in production in Maryland, Michigan, Minnesota, North Carolina, and South Carolina.
- Work began on February 25, 2002.
- Interviews were conducted with subject matter experts during the week of February 25.
- Bentley presented a first prototype of the various user interfaces to Caltrans during the week of March 18.
- Based upon Caltrans' comments, Bentley then developed a second prototype and presented it to Caltrans and several trucking industry representatives during the week of April 8.
- Based upon Caltrans' and the trucking industry's comments on the second prototype, Bentley developed a design document and presented it to Caltrans on May 10, 2002. Caltrans reviewed the design document and provided comments to Bentley on June 5.
- Since January 2002, Bentley Services, Inc. began to prototype and demonstrate GeoTransport ARPS and submitted four Customization Design Statements (CDS) versions to Caltrans by November 2002. In addition, negotiations continued regarding contract roles and responsibilities and the 99.8% application "up time" requirements.
- Caltrans delivered comments on the fourth version of the CDS by December 2002.
- January 2003, Department of Finance (DOF) and Department of Transportation (DOT) requested an Independent Assessment of the TPMS project. Bentley Systems, Inc. was advised not to proceed with any TPMS development activities until after the contract amendment was developed and the independent assessment completed.
- Contract Amendment 1 changed the location of the servers from DOT to the Teale Data Center (TDC). Contract Amendment 1 with Bentley Systems was signed and executed in May 2003.
- In April 2003, Booz-Allen-Hamilton was contracted to perform an Independent Assessment of the TPMS project. The assessment would determine if the objectives represented in the June 2001 TPMS Feasibility Study Report would be better met with the current interim permits system or with the proposed TPMS system as specified in the Bentley CDS's. Based on the findings identified in the final May 15, 2003 report, the Business, Transportation and Housing Agency, DOT and DOF jointly agreed that Caltrans would complete the TPMS project.
- As suggested by DOF, a TPMS Project Manager, experienced in Information Technology application deployment, began work on July 1, 2003. A Functional Program Manager and a new Independent Project Oversight Consultant are assigned to the TPMS project.
- The TPMS Steering Committee held its kick-off meeting on August 4, 2003.
- DOT submitted a Special Project Report (SPR) required due to the TPMS project delayed caused by contract negotiations, the contract amendment changing the location of the servers to TDC, and the Independent Assessment effort. Control Agencies approved SPR on September 11, 2003.

## Status

- Caltrans authorized Bentley to restart the project by letter on September 17, 2003.
- Caltrans sent its review comments to Bentley, on the 35 requirements that the Booz-Allen-Hamilton Independent Assessment found to be either unmet or partially met, on October 15, 2003.
- On November 10, 2003, Caltrans sent its review comments to Bentley on the CDS 3.01 review summary comments; and Permitting and Routing CDS, version 3.01.
- On November 12, 2003 Caltrans sent its review comments to Bentley on the Route Data Maintenance CDS, version 3.01; and Vehicle Inspection CDS, version 3.01.
- On January 14 and January 15, 2004, Caltrans and Bentley held conference sessions to resolve the CDS issues with only 1 unresolved issue remaining.
- Caltrans and Bentley have reached resolution on all of the outstanding CDS issues. Caltrans approved the three Customization Design Statements- Permitting and Routing; Data Maintenance; and Vehicle Inspection on March 8, 2004.
- Contract Amendment 2 replaced the equipment that was no longer manufactured as specified in Contract Amendment 1. Contract Amendment 2 with Bentley Systems was signed and executed on March 18, 2004.
- Caltrans presented PowerPoint demonstration of TPMS to CTPAC Steering Committee meeting on April 19, 2004.
- Caltrans delivered completed test scenarios to Bentley on June 4, 2004.
- Caltrans presented PowerPoint demonstration of TPMS to CTPAC meeting for the second time, on June 9, 2004.
- Special Project Report to reflect current project schedule is completed and delivered to BT & H Agency on August 10, 2004.
- Final version of Teale Data Center Service Request and Statement of Work to build TPMS production environment were signed and delivered on September 29, 2004.
- On October 25, 2004, Test Consultant contract was completed and executed.
- Caltrans staff and industry users were provided Test training on Nov 15-19, 2004.
- Caltrans South Region staff and industry users at CTPAC mtg.; and Caltrans North Region staff were provided TPMS demonstration on 1/26/05 and 2/3/05 respectively.
- Caltrans recorded 409 application defects in Acceptance Test as of 1/31/05.
- Route Clearing data separation process, now 84% completed as of 1/31/05.
- Vehicle Inspection data entry, estimated 4,756 to be processed with 663 completed as of 1/31/05.

The remainder of the project schedule is as follows:

Activity	Target Start Date	Target Completion Date
Detailed Requirements Definition and System Design	2/25/02	7/29/04
System Customization	5/14/04	8/26/04
Data Conversion	2/25/02	3/31/05
System Acceptance Testing	2/25/02	2/8/05
Installation and Training at North Region	2/28/05	3/11/05
Installation and Training at South Region	3/14/05	3/25/05
Begin Production Use Statewide	3/31/05	3/31/05

Starting **September 1, 2005**, applications by fax will no longer be accepted.